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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,480	08/05/2003	John Michael Friel	6258-071A (A01172A)	6808
21898	7590	04/29/2004	EXAMINER	
ROHM AND HAAS COMPANY PATENT DEPARTMENT 100 INDEPENDENCE MALL WEST PHILADELPHIA, PA 19106-2399			HU, HENRY S	
			ART UNIT	PAPER NUMBER
			1713	

DATE MAILED: 04/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/634,480

Applicant(s)

FRIEL ET AL.

Examiner

Henry S. Hu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Pre-Amendment of August 5, 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-10, 12-22 and 27-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-10, 12-22 and 27-36 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 12, 14-22 and 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11-10-2003
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

1. This application 10/634,480 is a **DIV** of application 09/785,389 filed February 16, 2001, now issued as US Patent No. 6,613,832. Applicants' **Pre-Amendment** filed on August 5, 2003 is acknowledged. The allowed Claims 1-4, 11 and 23-26 were cancelled. The priority information on page 1 at first paragraph was updated. **Claims 5-10, 12-22 and 27-36 are pending now.** An action follows.

DETAILED ACTION

Specification

2. The disclosure is objected to because of the following informalities:

(a) On page 5 at line 2, recitation of “,and a crosslinker” should be changed to “**and a crosslinker**”.

(b) On page 15 at line 5, recitation “titanium oxide” should be changed to “**titanium dioxide**” in order to be consistent with the same recitation on page 15, line 2 and page 14 at line

29. Otherwise, one having ordinary skill in the art may be confused.

(c) On page 5, line 13-14 and 28-29 and may be throughout the specification, all recitations such as “less than about 20 to about 50” should be changed to “**about 20 to about 50**”

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in order to avoid the confusion. Since “less than about 20 to about 50” means from 0 to 50, it does not mean from 20 to 50.

Appropriate corrections for (a) - (c) are required.

Claim Objections

3. Claims 5-6, 12, 14-22 and 27 are objected to because of the following informalities:

(a) On **Claim 5-(a)-(iii)** at line 2 as well as **Claim 6-(a)-(iii)** at line 2, all recitations of “a peel of less than about 20 about 50” should be changed to “a peel of about 20 to about 50” in order to avoid the confusion. Since “less than about 20 to about 50” means from 0 to 50, it does not mean from 20 to 50. Additionally, **there is a missing number of (i), a new numbering starting with (i) is needed for both Claims 5-6.**

(b) On Claims 12, 14-22 and 27, the claim dependency needs to be clarified with some rewriting, since **Claims 1-4, 11 and 23-26 have been cancelled.**

Appropriate correction is required.

Claim Rejections - 35 USC § 103

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims **5-10, 13-22 and 27-36** are rejected under 35 U.S.C. 103(a) as being unpatentable over McClain (US 6,221,145) in view of Skeist (Handbook of Adhesives, 3rd Ed.).

The limitation of parent Claim 5 in the present invention relates to a method of forming at least one adhesive line, which method comprises the steps of:

(a) providing a set of different, but mutually compatible, fluid binder premixes which set comprises: (ii) at least one premix which comprises at least one polymeric binder having a peel < 20 ounces/inch, a Polyken tack < 300 g, and a shear > 50 hours. (iii) at least one premix which comprises at least one polymeric binder having a peel of 20-50 ounces/inch, a Polyken tack of 300-500 g, and a shear of 5-50 hours. (iv) at least one premix which comprises at least

one polymeric binder having a peel > 50 ounces/inch, a Polyken tack of >500 g, and a shear < 10 hours.

(b) dispensing a predetermined amount of each of the premixes into containers or a supplier to form the adhesive line.

The other two parent Claims 6 and 13 relate to Claim 5 with some more limitation. See dependent Claims 7-10, 12, 14-22 and 27-36 for other limitations.

6. Regarding the limitation of parent Claim 5, McClain discloses **a method of producing an aqueous paint composition from a plurality of premixed components**. Four premixed aqueous formulations including pigment, dispersant-thickener, low resin and high resin are used for programmed **dispensing at the point of sale with predetermined amount for each of the premixes** (column 4, line 1-13; column 3, line 25-67; column 4, line 46-60). McClain further discloses three additional premixed aqueous compositions are available to custom prepare the desired paint (column 3, line 6-8).

The difference between McClain and Claim 5 is that McClain does not specifically disclose **such a dispensing method can be applied to prepare the adhesive line using set of binder premixes**. McClain has already used premixes of low resin and high resin to prepare different paint finish of flat, satin, semi-gloss and high-gloss (column 3, line 56 – column 4, line 13). Skeist teaches the **good adhesives** will have a tack of 100 g (common), 500 g (good) and 1500 g (very good) (page 656, line 14, 45 and 48), a peel of 25 ounces/inch (normal) and 100-150 ounces/inch (very good) (page 658, line 1-6), and a shear (page 658). Therefore, one having

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ordinary skill in the art would have found it obvious to extend McClain's dispensing method to use premixes of conventional binders with all ranges of tack, peel and shear as taught by Skeist to prepare a adhesive line with advantage of being suitable for programmed dispensing at the point of sale.

7. Regarding **Claims 7 and 9**, Skeist also teach a series of conventional additives such as crosslinker, plasticizer or opacifying pigment were used for the formulation of adhesive (page 625, Table 18). Therefore, one having ordinary skill in the art would have found it obvious to include additional premixes of various adhesive additives to the binder premixes with advantage of improving the adhesive properties for programmed dispensing at the point of sale.

Regarding **Claim 8**, four premixed aqueous formulations including pigment, dispersant-thickener, low resin and high resin are used for programmed dispensing at the point of sale with predetermined amount for each of the premixes into the containers or applicators (column 4, line 1-13; column 3, line 25-67; column 4, line 46-60).

Regarding **Claim 10**, the number of premixes is more than four as disclosed above by McClain.

8. Regarding the limitation of parent **Claims 6, 13 and the dependent Claims 14-22 and 27-36**, it is noted that parent Claims 6 and 13 are related to the limitation of parent Claim 1 with some more limitation. It is also noted that dependent Claims 27-36 are dependent from the

already-allowed Claim 23-26. In a close examination, the difference between McClain and the above-mentioned claims is that McClain does not specifically disclose the dispensing method can be apply to prepare the adhesive line using set of binder premixes. McClain has already used premixes of low resin and high resin to prepare different paint finish of flat, satin, semi-gloss and high-gloss (column 3, line 56 – column 4, line 13). Skeist teaches the glass transition temperature T_g has notable effects on properties of adhesive (page 391 and table 6) and adding extenders such as wheat flours with advantage to manipulate the adhesive's hygroscopicity (page 608, line 3-14). Skeist further teaches a series of conventional additives such as crosslinker (γ -aminopropyltriethoxy silane), plasticizer (phthalate) or opacifying pigment (titanium dioxide) were used for the formulation of adhesive (page 625, Table 18).

Therefore, one having ordinary skill in the art would have found it obvious to extend McClain's dispensing method by using premixes of conventional binders with all range of glass transition temperature, by including extenders premix to control hygroscopicity, and by incorporating various conventional opacifying pigment such as titanium dioxide as an ingredient in the premix as taught by Skeist to improve the properties of adhesives with advantage of being suitable for programmed dispensing at the point of sale.

9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over McClain (US 6,221,145) in view of Skeist (Handbook of Adhesives, 3rd Ed.) and McConnaughay (US 3,868,263).

The discussion of the disclosures of the prior art of McClain/Skeist for Claims 5-10, 13-22 and 27-36 of this office action is incorporated here by reference. Regarding the limitation of **Claim 12**, the difference between McClain/Skeist and Claim 12 is that McClain/Skeist do not specifically disclose the use of a prepolymer to form a premix.

McConnaughay teaches a paving composition can be obtained by preparing a premix of prepolymer such as a binder-coated aggregate from curing of primary binder, and thereby mixed with a secondary binder when used, the advantage is the partially formed paving composition can be stockpiled or stored for later use without being subjected to deterioration as by rain or watering (column 1, line 26-29). Skeist teaches the glass transition temperature T_g has notable effects on properties of adhesive (page 391 and table 6).

Therefore, one having ordinary skill in the art would have found it obvious to extend McClain's dispensing method to use premixes of conventional binders with all range of glass transition temperature and also include premixes of prepolymer and its secondary polymer for later curing whenever it is needed as taught by Skeist with advantage of being suitable for programmed dispensing at the point of sale.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. The following references relate to the preparation of a set of fluid binder premixes to form an adhesive line:

Brock et al. (US 5,672,649) disclose process for preparing aqueous coating agents using modular systems with adjustable optical effects by mixing at least two storage-stable pre-mixed aqueous modules (units) (abstract, line 1-3). A link of motivation from a secondary prior art is needed to extend Brock's dispensing method by further applying it to prepare the adhesive or chalk line by using set of binder premixes. Therefore, Brock fails to teach the limitation of present invention.

Newman et al. (US 5,114,630) only disclose a continuous process for manufacturing and casting fluid products, particularly highly filled, energetic materials with use of feedforward composition quality control and plug flow (abstract, line 1-6; column 1, line 37-46). Only some premixes are disclosed (see examples). No dispensing method by further applying it to prepare the adhesive or chalk line by using set of binder premixes is disclosed. Therefore, Newman fails to teach the limitation of present invention.

11. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Henry S. Hu whose telephone number is (571) 272-1103. The examiner can be reached on Monday through Friday from 9:00 AM –5:00 PM.

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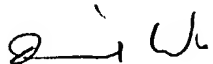
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The fax number for the organization where this application or proceeding is assigned is (703) 872-9306 for all regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Henry S. Hu

April 26, 2004


DAVID W. WU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700